

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re:	Paul Mattackal Verghese	Confirmation No:	6972
Serial No:	10/743,238	Group:	2872
Filed:	December 22, 2003	Examiner:	Chang, Audrey Y.
For:	Dual Membrane Single Cavity Fabry Perot MEMS Filter		
Customer No.:	25263		
Attorney Docket No.	0005.1120US1		

### **Petition Under Rule 181**

#### **Commissioner for Patents**

P.O. Box 1450  
Alexandria, Virginia 22313-1450

Sir:

This is the Applicant's Petition from the final Office Action, mailed August 3, 2005 (Paper No.08022005).

This petition is being filed with a Request for Continued Examination.

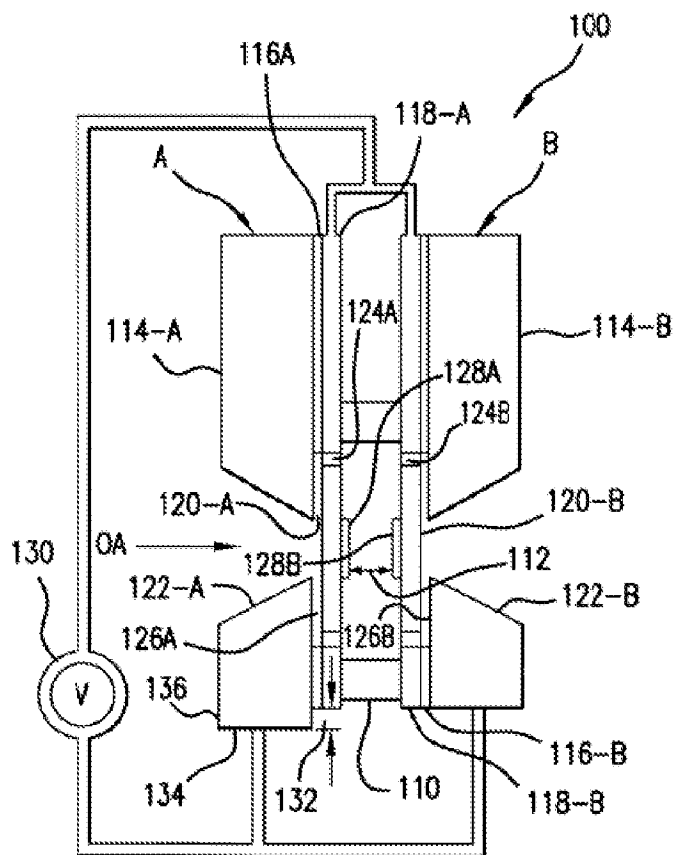
A three-month extension is requested for this response.

#### **Statement of Facts**

##### **Drawing Objection:**

1. The drawings were objected to under 37 C.F.R. § 1.83(a) for failing to show every feature of the claimed invention. Specifically, the Office Action stated that the “optical port through the substrate of at least one of the first membrane device” of claims 8 and 17 was not shown in the drawings.

2. Fig. 1 from the application is as follows:



**FIG. 1**

Please note reference numerals 122-A, 122-B referring to ports through substrates 114-A, 114-B, respectively.

3. Paragraph 0020 of the instant published application, US 2005/0134962 A1, provides:

[0020] In the preferred embodiment, each of the membrane devices is based on the Planders SOI MEMS membrane device. Specifically, each of the membrane devices A, B includes a handle wafer 114. (Note that the A and B designators after the reference numerals are used to indicate the corresponding membrane device.) A sacrificial oxide layer 116 is used to separate the handle wafer 114 from a device layer 118. A membrane 120 is fabricated in each of the membrane devices A, B by removing the sacrificial release layer 116 from underneath the membrane structure 120. Further, according to the preferred embodiment, a backside optical port 122 is provided in the handle wafer material or substrate 114 so that the optical signal being transmitted along the optical axis A can be injected directly into the Fabry-Perot cavity 112. Antireflective coatings are further preferably deposited on the backsides of the membranes layers 118 to minimize parasitic reflections.

New matter objection of specification and rejection of claim 14

1. The previous amendment was objected to for introducing new matter.

Specifically, claim 14 was rejected because the specification failed to provide support for "flexures enabling the electrostatic deflection of the...membrane."

2. Fig. 1 above shows flexures 124A, 124B.

3. Paragraph 0021 of the instant published application, US 2005/0134962 A1, provides:

[0021] In the preferred embodiment, flexures 124 are formed in the device or membrane layer 118 to control the flexibility of the membranes 120. Specifically, these flexures are formed by etching regions of the device layer 124 to create voids to thereby control the membrane's deflectability.

**Argument**

Drawing Objection:

The optical port through the substrate is clearly shown in the figure. Specifically, Fig. 1 shows a first optical port 122-A through substrate A and optical port 122-B through substrate B. Thus, the figures show the subject matter of the claims.

Thus, withdrawal of these objections is respectfully requested.

New matter objection of specification and rejection of claim 14

The original specification and claims clearly show and describe flexures that enable the deflection of the membrane 120.

Thus, withdrawal of this objection and rejection is respectfully requested.

For the foregoing reasons, Applicant believes that the pending objections should be withdrawn. Should any questions arise, please contact the undersigned.

Respectfully submitted,

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